# Utilisation of Erector Spinae Catheter-Based Analgesia Practice in Thoracic Surgery Patients

Sir,

The authors are writing to bring attention to the recent clinical practice standards regarding the utilisation of erector spinae catheter-based analgesia practice in 76 thoracic surgery patients over the period of 30 months. Erector spinae plane block (ESPB) involves the targeted deposition of local anaesthetic in the myofascial plane between the erector spinae muscle and transverse processes. The ESPB has the advantage of being considered even in the presence of coagulation abnormalities.[1] The site of action is the ventral and dorsal rami of thoracic spinal nerves extending from T3 to T10. The analgesic effect is provided by blocking the posterior branch of the thoracic spinal nerve, but also at paravertebral space by blocking the anterior branch of the thoracic spinal nerve and the intercostal nerve, following the craniocaudal and lateral extension into these nerves. The ESPB reduces the opioid consumption postoperatively and hence complements the enhanced recovery after surgery (ERAS) protocols.[2] Figure 1 shows the ESPB anatomy.

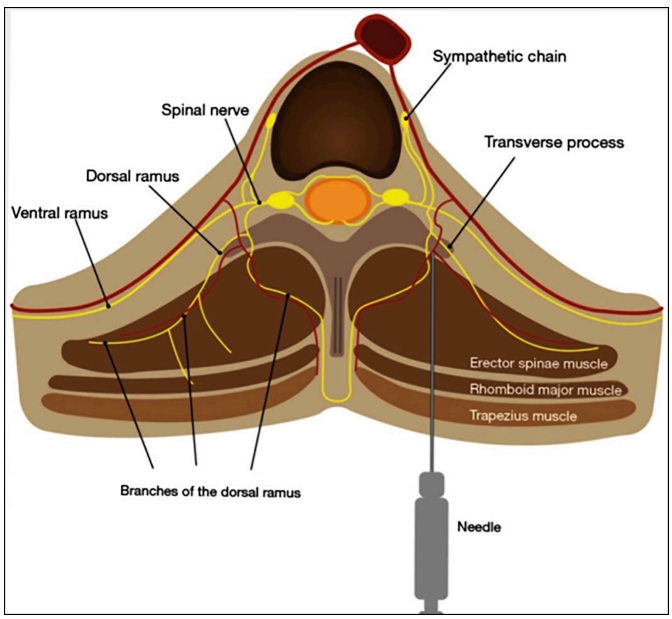


**Figure 1: Anatomy of erector spinae plane block.**

Ultrasound-guided ESPB is preferred over the landmark technique approach. Datchinamourthy *et al*. preferred intermittent boluses over continuous infusion, however, they used low volume (5ml/hour).[3] The authors applied this technique on 50 patients, with a mean age of 46.8 years, and all were males. From our experience, the authors recommend 0.15% and 0.2% bupivacaine at 15-20ml/hour for continuous infusions, keeping in mind both the local anaesthesia toxicity and analgesic effects. For bolus doses, the authors recommend 0.20% bupivacaine 20 ml before mobilisation and chest physiotherapy.[4] The present practice is that the patient remained on continuous infusion for the first 24 hours, and then after re-evaluation, the patient was shifted to programmed intermittent boluses along with pregabalin, tapentolol, and paracetamol on the day of discontinuation of the continuous infusion regime.

On average, the catheter remained *in-situ* from 2.8 days to a maximum of six days.

The complication rate in the present patients is zero. The major complications in the literature that can happen include pneumothorax, hemi-diaphragmatic paralysis, and other respiratory complications.[5] The only complication that the authors faced is accidental catheter pull-out in 10 cases (13.1%), and 1 (1.3%) patient had leakage from the catheter site.

The above suggestion may provide an impetus for other anaesthetists to improve their practice and how to make the best utilisation of ESPB to provide opioid-free analgesia services in thoracic surgery patients.

**COMPETING INTEREST:**
The authors declared no conflict of interest.

**AUTHORS' CONTRIBUTION:**
SUR: Contribution to the conception of data.
NQ: Interpretation of data for the work.
AK: Proofreading of the study.
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